

EXTRACTOR CUP ON A MINIATURE X-RAY TUBEAbstract of the Disclosure

Methods for connecting electrical potential to an extractor cup at the cathode of a miniature x-ray tube are disclosed. The various connection schemes are designed to form a rugged and conveniently manufacturable connection between the metal extractor cup and one side of the cathode filament, so that the extractor cup shapes the path of electrons as desired en route to the anode of the tube. Some of the disclosed connections involve evaporation of conductive metal or other materials off the filament when the filament is first activated. Others involve applying a paste or paint conductive precursor directly to a base to connect a post and the extractor, the paste being heat-cured after the completion of assembly. Others involve a fine wire or spring strip from one filament post to the walls of the extractor cup. Other schemes include welded or brazed wires or foil, crimping, pinching, swaging and other connections, all made inside the tube enclosure.